

WYGY(FM) Goes Digital

CINCINNATI Susquehanna Radio Corp.'s WYGY(FM) began transmitting in both analog and digital on Oct. 16, possibly the first FM station to activate full-time HD Radio/IBOC service.

The station already had been transmitting a digital carrier in addition to its licensed 50 kW analog signal, but the digital carrier did not carry an audio component.

Harris transmitters.

The station is using the high-level combining method, with an ERI unit to combine the signals before they go into the ERI antenna, Turner said. High-level combining was chosen for compatibility with the equipment in the station.

Turner says there have been no glitches with the digital equipment, and conversion took just a matter of minutes because the



Max Turner and Norman Philips listen to the WYGY(FM) HD Radio signal as they stand in front of the 500,000-watt transmitter at Cincinnati's WLW(AM) with an old tube, Crosley radio and Ibiquty Digital Corp. receiver. WYGY shares its transmitter site and antenna with WLW in Mason, Ohio.

Harris Broadcast had installed a digital exciter and transmitter, and, using a spectrum analyzer and a computer, watched for any artifacts introduced into WYGY's analog signal by the digital signal. Harris continues to monitor the station from its nearby headquarters and has found no problems with the analog or digital signals, said Max Turner, regional engineering manager for Susquehanna.

WYGY is using a Harris Z Series transmitter, the Z-HD 16 FM, and a Harris digital exciter for the digital signal, and a Harris FM 25 CD transmitter for the analog signal.

The effective radiated power for the digital is about 500 watts.

Omnia processors are used for both the analog and digital signals coming out of the exciters and into the transmitters. Omnia founder and Telos Systems President Frank Foti installed the digital audio processor.

The air chain is as follows: The station uses an ENCO audio storage system with linear audio, fed through a Harris BMX-D console, to an Intraplex T-1 link. The signal is fed into the processors — an Omnia-6dab for digital and Omnia-6fm for analog — then into the Harris Digital exciter for the IBOC and the Harris Digit for the analog signal.

The feeds then are sent to separate

necessary equipment was in place.

Jocks are not yet promoting that the station has gone digital; the station is waiting until HD Radio receivers are available.

Because of the approximately seven-second delay inherent in the IBOC technology, Turner said the air staff monitors programming off-air with a dummy feed using a processor. They hear the audio before it leaves the studio.

"A delay is common in talk formats," said Turner of WYGY, which has a country format. "Now we're doing it for another reason."

Turner said employees used a test receiver from Ibiquty at first to hear the station in digital. It expects to receive a portable version soon, and plans to take that into nearby buildings where the analog signal is prone to interference and see how the digital signal fares.

Those present for the switchover besides Turner were Norman Philips, Susquehanna director of technical operations; Kevin Surgeon, chief engineer for Susquehanna's Cincinnati stations; George Cabrerias, principal electrical engineer for Harris Broadcast; Geoff Mendenhall, vice president of advanced product development for Harris Broadcast; and Foti.

— by Leslie Stimson